

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-28 (canceled).

Claim 29 (new): A device for determining the state of a soot particle filter of an internal combustion engine, comprising an electrical measuring arrangement configured as a soot sensor for measuring a soot deposit of the soot particle filter, including an electrical component with a conductor structure for exciting an electrical or magnetic field influenceable by the soot deposit and characterizes an electrical or magnetic characteristic variable of the component as a measure of a quantity of the soot deposit, wherein the conductor structure is arranged such that a partial volume region of the soot particle filter is penetrated by the electrical field and the partial volume region forms part of the component, and the electrical component is a coil or a capacitor.

Claim 30 (new): The device as claimed in claim 29, wherein the soot deposit is measurable in partial volume regions of the soot particle filter that are different from one another.

Claim 31 (new): The device as claimed in claim 29, wherein the measuring means measures a characteristic variable of the component which is linked to the electrical impedance.

Claim 32 (new): The device as claimed in claim 31, wherein at least one of the absolute value and phase of the electrical impedance is measurable.

Claim 33 (new): The device as claimed in claim 31, wherein at least one of the ohmic resistance, the capacitance and the inductance of the component is measurable.

Claim 34 (new): The device as claimed in claim 32, wherein at least one of the ohmic resistance, the capacitance and the inductance of the component is measurable.

Claim 35 (new): The device as claimed in claim 29, wherein switching means are provided for automatically initiating regeneration of the filter when a predefinable triggering measured value is reached.

Claim 36 (new): The device as claimed in claim 29, wherein switching means are provided for automatically ending the regeneration of the filter when a predefinable limiting measured value is reached.

Claim 37 (new): The device as claimed in claim 29, wherein means are provided for at least one of measuring the temperature of the filter and performing temperature compensation on the measurement signal.

Claim 38 (new): The device as claimed in claim 29, wherein a coil-shaped conductor structure is arranged at least partially in the interior of the soot particle filter.

Claim 39 (new): The device as claimed in claim 29, wherein a coil-shaped conductor structure is arranged outside the soot particle filter.

Claim 40 (new): The device as claimed in claim 38, wherein the soot particle filter is of cylindrical configuration, and a coil longitudinal axis of the coil-shaped conductor structure is oriented one of approximately parallel and approximately perpendicular to a longitudinal axis of the soot particle filter.

Claim 41 (new): The device as claimed in claim 39, wherein the soot particle filter is of cylindrical configuration, and a coil longitudinal axis of the coil-shaped conductor structure is oriented one of approximately parallel and approximately perpendicular to a longitudinal axis of the soot particle filter.

Claim 42 (new): The device as claimed in claim 38, wherein the measuring arrangement further comprises a second conductor structure, the coil-shaped conductor structure being operatively connected to the second conductor structure which has an electrical characteristic variable influenceable by the soot deposit and measurable by the measuring means.

Claim 43 (new): The device as claimed in claim 42, wherein the measuring arrangement further comprises a second conductor structure, the coil-shaped conductor structure being operatively connected to the second conductor structure which has an electrical characteristic variable influenceable by the soot deposit and measurable by the measuring means.

Claim 44 (new): The device as claimed in claim 42, wherein the second conductor structure is a second coil-shaped conductor structure, and a variable which correlates to the mutual inductance which is effective between the coil-shaped conductor structures is measurable by the measuring means.

Claim 45 (new): The device as claimed in claim 43, wherein the second conductor structure is a second coil-shaped conductor structure, and a variable which correlates to the mutual inductance which is effective between the coil-shaped conductor structures is measurable by the measuring means.

Claim 46 (new): The device as claimed in claim 42, wherein the coil-shaped conductor structure is arranged in an exhaust gas flow direction with an offset with respect to the second conductor structure.

Claim 47 (new): The device as claimed in claim 43, wherein the coil-shaped conductor structure is arranged in an exhaust gas flow direction with an offset with respect to the second conductor structure.

Claim 48 (new): The device as claimed in claim 44, wherein the coil-shaped conductor structure is arranged in an exhaust gas flow direction with an offset with respect to the second conductor structure.

Claim 49 (new): The device as claimed in claim 44, wherein the coil-shaped conductor structure is arranged in an exhaust gas flow direction with an offset with respect to the second conductor structure.

Claim 50 (new): The device as claimed in claim 29, wherein the conductor structure comprises a pair of electrodes with a first electrode and a second electrode spaced from the first electrode, the partial volume region being arranged between the first electrode and the second electrode.

Claim 51 (new): The device as claimed in claim 50, wherein at least the first electrode and the second electrode is arranged on or a short distance from an outer surface of the soot particle filter.

Claim 52 (new): The device as claimed in claim 50, wherein the measuring arrangement further comprises at least two pairs of electrodes.

Claim 53 (new): The device as claimed in claim 51, wherein the measuring arrangement further comprises at least two pairs of electrodes.

Claim 54 (new): The device as claimed in claim 52, wherein the first pair of electrodes is arranged in the exhaust gas flow offset from the second pair of electrodes.

Claim 55 (new): The device as claimed in claim 53, wherein the first pair of electrodes is arranged in the exhaust gas flow offset from the second pair of electrodes.

Claim 56 (new): The device as claimed in claim 29, further comprising a second electrical measuring arrangement operative as a soot sensor for

measuring a soot deposit is arranged downstream of the soot particle filter with respect to a flow direction through the soot particle filter.